

REMARKS

In the Advisory Action dated July 31, 2003, the Examiner has maintained the final rejection, dated April 3, 2003, of pending claims 1-32. By the present amendment, claims 1 and 17 have been amended. Accordingly, claims 1-32 are pending in the present application. Reconsideration and allowance of pending claims 1-32 in view of the amendments and the following remarks are respectfully requested.

A. Rejection of Claims 1-4, 6-15, 17-20 and 21-31 under 35 USC §103(a)

The Examiner has rejected claims 1-4, 6-15, 17-20 and 22-31 under 35 USC §103(a) as being unpatentable over Giri et al. (USPN 6,261,467) ("Giri '467") in view of Naya (USPN 6,077,765) ("Naya '765"). Applicant respectfully disagrees; however, in order to expedite the prosecution of this application, applicant has amended independent claims 1 and 17 to specify that the second conductor comprises "at least two conductor segments" and that the first conductor "electrically connects said at least two conductor segments." For the reasons that follow, applicant respectfully submits that independent claims 1 and 17, from which claims 2-16 and 18-32 respectively depend are patentably distinguishable over the cited references of record, considered singly or in combination.

The present invention, as defined by amended independent claim 1, specifies a structure that includes, among other things, "a first conductor, a first isolation layer situated over said first conductor, a second conductor comprising at least two conductor segments situated over said first isolation layer, said second conductor comprising under

bump metal, said second conductor having at least one external pad associated with one of said at least two conductor segments, wherein said first conductor electrically connects said at least two conductor segments, and a second isolation layer situated over said second conductor.” With reference to Figure 1 of the present application, an exemplary arrangement is shown wherein conductor 120 electrically connects two conductor segments of conductor 136 (first segment associated with external pad 138, and second segment associated with external pad 140). As discussed in the present application, this particular structure allows passives, such as inductors and transformers, to be formed from said first and second conductors and to be integrated on die. For example, an inductor realized in the manner specified by claim 1 beneficially has lower parasitic capacitance, lower resistivity, and superior quality factor, and since the inductor is fabricated on the die, it is smaller than typical off-die inductors. See, for example, page 17, line 19 through page 18, line 22 of the present application.

In contrast, with reference to Figures 1 and 1A of Giri ‘467, Giri ‘467 discloses a ceramic chip carrier comprising conductive layer 102 (identified by the Examiner as “first conductor 102”) connected to wiring layer 110 (identified by the Examiner as “second conductor 110”). A joining pad layer 118 (identified by the Examiner as “under bump metal 118”) is situated over wiring layer 110 for connection to a chip via solder (element “C4”). With this arrangement, electrical connectivity is provided from the chip by way of solder “C4”, joining pad layer 118, wiring layer 110, conductive layer 102 through

ceramic substrate 138 by way of via 124, to mount pads 121 and attaching pins 122 situated on the bottom surface of ceramic substrate 138.

In Giri '467, conductive layer 102 does not electrically connect at least two segments of wiring layer 110. Instead, conductive layer 102 merely provides an electrical path from wiring layer 110 to via 124. As such, conductor layer 102 and wiring layer 110 in Giri '467 cannot be configured to form passives, in accordance with the present invention, as discussed above. In sum, Giri '467 simply discloses a wiring arrangement for providing an electrical connection from the chip to pins 122 e.g., for connection to a printed circuit board, by way of wiring layer 110 and conductive layer 102, and fails to disclose the structure specified by claim 1, wherein the second conductor comprises "at least two conductor segments" and that the first conductor "electrically connects said at least two conductor segments." Furthermore, Naya '765 fails to cure the basic deficiencies of Giri '467 since Naya '765 neither discloses nor remotely suggest a second conductor comprising "at least two conductor segments" wherein the first conductor "electrically connects said at least two conductor segments, as specified by claim 1. For these reasons, applicant respectfully submits that rejection of independent claim 1 and its corresponding dependent claims 2-16 has been traversed, and therefore, claims 1-16 should now be allowed.

The Examiner has rejected independent claim 17 for reasons similar to those discussed above in relation to independent claim 1. For at least the same reasons

discussed above, applicant respectfully submits that independent claim 17 and its corresponding dependent claims 18-32 should also be allowed.

B. Rejection of Claims 5 and 21 under 35 USC §103(a)

The Examiner has further rejected claims dependent 5 and 21 under 35 USC §103(a) as being unpatentable over Giri '467 in view of Naya '765, as applied to claims 1-4, 6-15, 17-20 and 22-31, and further in view of Utsumi et al. (USPN 6,091,310) ("Utsumi '310"). As discussed above, the present invention, as defined by independent claims 1 and 17, is patentably distinguishable over Giri '467 and Naya '765, and, as such, claim 5 depending from independent claim 1 and claim 21 depending from independent claim 17 are, a fortiori, also patentably distinguishable over Giri '467 and Naya '765.

C. Rejection of Claims 16 and 32 under 35 USC §103(a)


The Examiner has further rejected dependent claims 16 and 32 under 35 USC §103(a) as being unpatentable over Giri '467 in view of Naya '765, and further in view of Mourant (USPN 5,886,589) ("Mourant '589"). As discussed above, the present invention, as defined by independent claims 1 and 17, is patentably distinguishable over Giri '467 and Naya '765, and, as such, claim 16 depending from independent claim 1 and claim 32 depending from independent claim 17 are, a fortiori, also patentably distinguishable over Giri '467 and Naya '765.

D. Conclusion

For all the foregoing reasons, allowance of claims 1-32 pending in the present application is respectfully requested.

Respectfully Submitted,
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